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JONES ON FUNCTIONAL NERVOUS DISORDERS.

12 PAGES.

CHOLERA.

Cholera.—The views of Prof. Geo. Johnson, in regard to cholera, are entitled to a respectful consideration, not only from the great ingenuity with which they are enforced, and the learning and high position of the writer, but also because they have been accepted as correct by a number of eminent practitioners. In our last number we ventured to point out some facts which appeared to us to be irreconcilable with his doctrines, and we shall now endeavour to indicate some others, which seem to us inexplicable by his hypothesis.

Prof. Johnson's views are based upon three propositions, viz: 1st. That cholera is produced by a poison which enters into the blood. 2d. That this poison acts first on the capillary arteries of the lungs, causing a spasm in them which prevents the blood from reaching these organs. 3d. That the discharges from the bowels are the result of an effort of nature to eliminate the poison;

and lastly, he concludes that the proper treatment of the disease consists in aiding nature in her efforts.

Each of the above propositions appears to us to be purely hypothetical, and the legitimate deduction from his premises eminently dangerous.

We will examine these propositions in detail.

1st. *As regards the existence of a poison in the blood.*—The existence of such poison has never been demonstrated, and without denying that such a poison may be a reality, it must be conceded that there are some facts in the history of the disease not easily explicable by such an hypothesis.

The prevalence of the disease in any one locality as an epidemic has, generally, a limited duration—usually about from four to six weeks—it has its regular period of increase, climax, and decline. The first cases are the most malignant, and after the disease has reached its climax it then decreases in violence and ceases. Now, were

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the cholera propagated by a poison, and especially were this poison the product of the dejections, as it is, in some way, usually believed to be, does it not seem strange that at the commencement of an epidemic when there is less of this poison generated the disease should be most violent and its victims most numerous; and at its climax when there is most of this poison produced, that the disease should then decrease and gradually cease?

The only attempt to explain this is by the supposition that the disease ceases because there are no more subjects susceptible to the influence of the poison. This is an endeavour to sustain one hypothesis by another equally without foundation.

Dr. William Baly, in his elaborate report to the Royal College of Physicians, remarks:—

"Moreover, there are reasons for believing that the cessation of the disease in a town is *not* owing to all persons susceptible of it having already been exposed to its cause and affected by it. In the first place, the disease may cease in a town, or a large public institution, and then after a short interval be renewed—as many persons suffering from it, in this renewed outbreak, as in the former one. An example of this is met with in the case of Sunderland, where a slight attack, between the months of October, 1848, and January, 1849, was succeeded, after more than a month's complete interval, by a second attack of far greater severity; this again being followed, after two months' interval, by a third outbreak of a still more serious character. It is not likely that, in this instance, the disease ceased in the two earlier outbreaks, because all the persons still susceptible of the disease, through some strange concurrence of circumstances, failed to be exposed to the contagious influence." (p. 50.)

2d. *With regard to the spasm of the pulmonary capillaries.*—This is not susceptible of demonstrative proof, and all that Prof. Johnson can adduce in support of the hypothesis is what he calls the anæmic condition of the lungs, found after death. If the choleraic poison acted primarily on the pulmonary arteries it might be reasonably supposed that it would occasion some recognizable lesion. But Drs. Pennock and Gerhard, Foy, Gendrin, Bouillaud, Leudet, and indeed, nearly all observers represent the lungs as healthy. Dr. William Gull, in

his admirable report to the Royal College of Physicians in treating of the post-mortem appearances of the lungs, states:—

"In the majority of cases fatal in the algide stage, no other morbid change existed than engorgement of the lower and posterior parts of the lungs with dark blood. In some instances this was so complete as to cause portions of the pulmonary tissue, to sink in water. The anterior and superior parts were drier than natural. In only one case reported to us was there any degree of œdema. In certain cases the *pulmonary tissue throughout was full of dark blood.*

"The bronchial tubes were normal in appearance, or their mucous membrane was congested. They contained a small amount of frothy serum, sometimes tinged with blood." (p. 38.)

Leudet states: "The lungs were commonly healthy, in two instances there was pulmonary apoplexy; frequently hypostatic congestion," "bronchi congested."

The above facts are subversive of Prof. Johnson's hypothesis.

3d. *As regards the dejections being an effort of nature to eliminate a poison from the blood.*—This proposition is as purely hypothetical as the preceding ones. The existence of such a poison, either in the blood or in the dejections, has not been proven, and if it were it would not be giving much credit to nature for sagacity, in supposing that she resorted to so dangerous a means of getting rid of this poison as by excessive vomiting and purging, whereby the blood is deprived of its nutritive materials and its most important anatomical element—water—leaving the remaining portion of the sanguineous fluid utterly unfit for the purposes of life.

Even admitting the existence of a poison in the blood, it is by no means certain that it is possible to eliminate it by purgatives or by any effort of nature.

Dr. C. Handfield Jones, in a recent article (*British Medical Journal*, May 5, 1866), remarks: "The analogy of most other diseases of a toxic kind would lead us to think that the morbid action is to be counteracted rather by endeavours to prevent its morbid effects, or to strengthen and hold up the vital forces against it, than by any process of elimination. Thus we deal best with malarious disorders, continued fever, influenza, erysipelas, snake-bite, and most cases of the exanthemata. In fact, except

perhaps in the cases of saturnine and uræmic intoxication, I doubt whether we have any power whatever to procure the separation of a poison from the system. How obstinately the syphilitic clings to its victim!"

All clinical experience is equally opposed to this doctrine. Our own observation in two epidemics and that we believe of all practitioners, shows that in the early stages of cholera no more fatal course can be pursued than the administration of active cathartics, and especially such as are most eminently evacuant, as those belonging to the saline and hydragogue class. They precipitate the patient speedily into collapse. A large dose of croton oil will bring on phenomena hardly distinguishable from those of cholera.

Dr. Goodeve, in a recent article on epidemic cholera in Reynold's *System of Medicine*, enumerates among the causes of cholera the noxious effects of purgative medicines. He says "numerous Indian writers recognize the mischief produced by these. I believe that this is not confined to the saline and hydragogue purgatives only. I have seen milder purgatives followed by cholera."

The most judicious and experienced practitioners of the present day recommend that the diarrhoea be arrested as early as possible—except where the bowels are filled with undigested matter, when a very mild laxative may be premised—by perfect rest, opiates, volatile and diffusible stimulants in moderate doses, mild diet, as beef tea, arrowroot, etc., and small portions of ice or cold water.

Prof. Johnson, in a reply to Dr. Jones' article, published in the *British Medical Journal* for 12th May, which came to hand after this article was in type, makes an admission which is virtually an abandonment of his doctrine of elimination, though of course he does not so intend it. Thus he says:—

"It is an indisputable fact, that a large proportion of cases of choleraic diarrhoea will terminate in recovery under the use of the simplest possible remedies which are wholly free from astringent properties. Thus the late Mr. Wakefield, who was surgeon to the Middlesex House of Correction during the last epidemic of cholera in 1854, stated in a letter to the *Times*, that he had treated upwards of 150 cases of choleraic diarrhoea amongst the prisoners by

thirty grains of sesquicarbonate of soda in a wineglassful of strong mint tea. The dose was repeated every half hour. No fatal case occurred. 'The disease was arrested with a rapidity that was quite magical,' and he had rarely occasion to administer the dose more than three times before the sickness and diarrhoea was arrested. While under treatment, the patient was confined to a diet of beef-tea, cocoa, or arrowroot; nothing solid, not even bread, being allowed while the diarrhoea continued. Now, this plan of treatment, which was remarkably well suited for allowing full play to the curative efforts of nature, can scarcely be supposed to have had any direct remedial effect, and it was certainly not an astringent treatment; yet the results were in the highest degree satisfactory."

Now this treatment of Mr. Wakefield's cannot be claimed to have been an eliminative one, and surely did not promote evacuations from the bowels, but was calculated to, and *did check them*. If then this treatment is highly satisfactory to Prof. Johnson, it certainly is so to us, and perfectly harmonizes with the views we have been endeavouring to inculcate.

In our next number we shall endeavour to show that it is upon the mucous membrane of the intestinal tube that the cause of cholera exerts its principal force—that it is there the most constant and greatest pathological changes are found—and that from the excessive secretion from that membrane which deprives the sanguineous fluid of its nutritive materials and most important anatomical element, is due the other prominent phenomena of the disease.

While we greatly distrust the assertion that patients have died of cholera, without having had any evacuation, and that death therefore cannot have been caused by the changes in the blood resulting from the dejections; we are not disposed to deny that the abdominal ganglionic and spinal nervous systems may be simultaneously affected. It is true that we have no conclusive pathological proofs of this—unless the muscular spasms, movements of the muscles after death, and unusually early occurrence of rigor mortis be accepted as such—but there are some clinical facts which lend it support. The writer of this suffered from an attack of cholera in 1832, which though it was arrested before profound collapse resulted, his nervous system was so profoundly affected

that it was not until after several months that its tone was restored.

Non-contagiousness of Cholera.—We invite attention to the following extract from the very sensible and admirable lectures on cholera by Prof. A. CLARK, lately published in the *Medical Record*, and which appear to us to be conclusive as to the non-contagiousness of cholera.

After quoting some of the strongest facts adduced in support of the belief in the contagiousness of cholera he observes:—

"Such are the facts and cases that are cited in support of the theory of contagion. Now, on the other hand, I will give you some statements and reports that seem to be altogether incompatible with the idea that the disease is communicable by personal contagion.

"It will occur to your own reflections, that if cholera was contagious in Cumberland or in Columbia, it will be contagious everywhere. Typhus is contagious in dwellings and in hospitals, in village and town, in summer and in winter. If the term 'contingent contagion' means anything, it can only be used in relation to the state of the individual—his power to resist contagion. The contagious principle is always the same: contingency cannot be predicated of it; nor is it apposite to say that one affirmative fact outweighs scores of negative ones, for the facts in this case are the occurrences of cholera as described. These are not doubted. The question at issue is, will these occurrences admit of any other explanation than the supposed contagion? If, then, it can be shown that in the broad study of the disease it is not spread directly by emanations from the sick, then the occurrences at Cumberland must have some other explanation, whether we have knowledge enough to make that explanation or not.

"Dr. Morris states that in the Massachusetts State Prison, at midnight, July 27th, 1854, he was called to see a coloured convict suffering from a choleraic attack. *He had been in solitary confinement for seven years.* Before Dr. Morris could get to bed again, he was called to four other prisoners, who had been attacked in different parts of the prison. During the next day, the succeeding night, and the following day, the cases multiplied; so that, in forty-eight hours, two hundred and five were more or less severely affected. The symptoms, Dr.

Morris says, were 'lividity of the lips, painful cramps, vomiting and purging, cold extremities, and in a few instances suppression of the urine.' On the 27th of July, the day had been very hot, and by a sudden change the night was very cold.

"A man who had been confined seven years in his cell, having no communication even with the prisoners in the institution, is the first to be seized. Suspicion was aroused that the food might be poisonous, but on examination it was found good and wholesome.

"Dr. Trask gives the following account of the outbreak of cholera in the Westchester Poor-House, in 1849:—

"Up to this time [the time of the outbreak], there had been no case of cholera, so far as I can learn, between this place [White Plaine] and New York [twenty-eight miles], nor was there any evidence of its introduction from that city."

"Suddenly, two men sleeping in beds almost adjoining, were seized with cramps, vomiting, and diarrhoea, after midnight, and before noon, both were dead. On the same day a female at the opposite end of the establishment was similarly attacked, and died in twenty-four hours. There were forty-seven cases, and twenty-seven deaths, among about one hundred and fifty inmates. He soon learned that diarrhoea had been prevailing in the establishment, and that most, if not all of those suddenly attacked had had this affection for some time.

"Parallel instances could be multiplied indefinitely. The whole history of cholera seems to look to another cause than contagion for its origin. As it began in European towns, it was almost always preceded by diarrhoea and colicky pains, and occasionally by cholera-morbus; and when at length it made its appearance, it often seized upon some person or persons who had not been out of town for a long time, between whom and infected places no connection could be traced, living in a very unhealthy locality; and at very nearly the same time other persons were seized in similar negative relations to the outside disease, and who had had no communication with the person first attacked.

"The settlement of the question can be somewhat aided by considering the history of hospitals, and the liability of nurses and physicians to the disease. Dr. Vanderveer gives an account of a little hospital of which he had charge in Franklin Street, in this

city, in 1854, where, it would seem, were assembled all the conditions necessary to give contagion force, if the disease is communicable in this way. He states that he had two wards, one above the other, the lower 25×35 feet, the upper, 25×30; that there were at times twenty-five patients in each of them; that the physicians and nurses slept in small adjoining rooms opening into the wards, and that the doors of their rooms were constantly open for ventilation; that the back yard, 20×30, inclosed by a wall twelve feet high, furnished room for the kitchen, water-closets, autopsy-room, wash-house; and a part of this space was reserved for the dead bodies, which were accumulated once to the number of ten, and till they became offensive. He says that the physicians made seventy-eight *post-mortem* examinations; that their hands, *bathed in the choleraic fluids, were often wounded*; that there were twenty physicians, nurses, and attendants, and that the only one of the twenty who had cholera, or any symptoms of cholera, was a sedan-carrier of temperate habits, who resigned his place because his work was too hard, and five days after was brought to the hospital in a dying condition.

"Here is a little pent-up place with water-closet, dead-house, and the dead piled up in coffins and exposed to the heat and sun, and shut in by a wall twelve feet high; the place full, the wards crowded, and the physicians and attendants, in effect, sleeping in the wards, and yet no one takes the disease. Histories of hospitals which teach the same lesson, few, however so emphatically, could be accumulated in our own country. From the European hospitals the same story comes. They do not all an-

nounce complete exemption of the physicians and attendants; but without any exception, the mortality is declared to be moderate—not exceeding what should be ascribed to the general liability, aided by fatigue and loss of sleep, and, on the part of nurses and attendants, often by intemperate habits. The physicians of cholera hospitals are rarely contagionists. The history of cholera hospitals does not sustain the doctrine of contagion; and here, if anywhere, contagion should be demonstrated. Out of almost countless reports that authorize these statements, I select the following table drawn up for the report of Drs. Gull and Baly, referring to the general hospitals of London in 1849.

"Examine this table attentively. Guy's Hospital did not admit persons attacked with cholera; yet one in 163 of its inmates, and one nurse to 490 patients, died of that disease. Five of these institutions admitted the disease, but confined the patients to particular wards. They had an aggregate of 1466 general patients, and 381 deaths from cholera. Multiplying the deaths by two, the usual hospital ratio between cases and deaths, the product, 762, will be about the number of cholera patients admitted. The deaths by cholera among other patients were one in 147, and among nurses one to 371 patients, including those admitted with cholera. Three hospitals, with an aggregate of 750 patients, received probably about 150 persons sick with cholera (deaths seventy-seven), and they were distributed among other patients. The deaths among these other patients were three, or one in 250; and of the nurses only one to 900 patients died.

Hospital.	No. of Patients.	No. of Deaths among Patients admitted with Cholera.	No. of Deaths from Cholera among other Patients.	No. of Deaths by Cholera among Nurses.	How the Cholera Patients were distributed in the Hospital.
Guy's Hospital . . .	490		3	1	No cholera patients admitted.
St. Bartholomew's . .	500	198	1	1	Cholera patients in special wards.
St. Thomas's Hospital .	430	66	6	3	" " " " " "
London Hospital . . .	330	40	None.	None.	" " " " " "
University Hospital . .	110	31	1	None.	" " " " " "
King's College Hospital .	96	46	2	2	" " " " " "
Middlesex Hospital . .	300	30	None.	None.	Distributed among other patients.
St. George's Hospital .	300	11	Two Surgical and one Medical.	1	" " " " " "
Westminster Hospital .	150	37	None.	None.	" " " " " "

"Throughout England, indeed all Europe, and from our own country, the testimony is cumulative, and to the best of my recollection nearly uniform from cholera hospitals, that nurses, while they incur the general risks during an epidemic, aside from the effects of fatigue and the excessive use of intoxicating drinks, are not in any degree specially exposed to the disease. I may say, in parenthesis, that I believe there is no fact better established than that intemperate persons are especially liable to cholera. The same statement may be made of those who are employed in rubbing and bathing the sick; of those who empty and cleanse the vessels which receive the discharges; of those who are engaged in transporting the sick, and of those who remove the dead.

"But there is a class of nurses and attendants who are more exposed to the disease than those who are usually employed in cholera hospitals. I refer to such as are engaged in the service of the sick within institutions when the disease has become epidemic. An example or two will make the point clear. In seventeen public lunatic asylums in England (Baly and Gull, 1849) visited by cholera, the total number of patients was 3639; of these 454 were attacked, and 311 died. In the same seventeen institutions there were 407 nurses, attendants and resident officers, of whom eighteen were attacked and six died, or thus—

Attendants attacked, 1 in 23; died, 1 in 68.
Patients " 1 in 8; " 1 in 12.

In the Milbank prison, containing at the time 1107 prisoners, twenty persons were charged with the care of the sick, and there were 178 persons who were by their offices not brought in contact with them, or only occasionally. The deaths among the prisoners were forty-eight, or one in twenty-three; among the nurses one, or one in 20; among other persons (including guards, clerks, etc.), one, or one in 178. Take these two accounts together and it is clear that, so far as the evidence goes, in institutions where cholera is epidemic, nurses are no more liable to the disease than other inmates, making exception for those whose hygienic surroundings were of a more protective character—indeed, in the lunatic asylums, that they were greatly less liable than others; while the one death in the prison makes a very unimportant figure

in the statistical estimate on the positive side, though significant in its negative relations.

"It does not appear that physicians who are attending cholera patients are more liable to the disease than others; indeed physicians seem to possess more than usual immunity. The number who have died in this city in the various epidemics is small. I have no statistics at hand to guide me, but I am confident that the percentage of mortality among them is less than among persons in the same social rank unconnected with the profession.

"Dr. Buel says, referring to the epidemic of 1854, of the Centre Street and Twenty-third Street hospitals, 'there were at different times eight or nine medical attendants, several of whom spent their whole time in the hospitals, eating and sleeping there, and no one took the disease;' and then adds, 'among the physicians attending five cholera hospitals, and the various other public institutions in which cholera prevailed extensively, there was not a fatal case, and only two were heard of that had the disease.' How sadly the records of typhus fever contrast with these statements, let the honoured names engraven on the mural tablet in this Hall testify; let the stricken families, that by a dire conscription are forced to contribute, year by year, their brightest ornament to swell the list of professional victims; let the bereaved and mourning, on whom my words now fall like the knell whose echoes have scarcely ceased, bear witness. An epidemic typhus in a hospital, I might also say, spares none; while epidemic cholera in hospitals assails so few, that we find no danger in such service beyond what pertains to the general epidemic influences.

"In considering facts like these, then, we are obliged to modify the opinion that might be formed from such striking instances as those of the Tooting School and those at Cumberland. Such occurrences can, indeed, be explained upon the general doctrine that there was an atmospheric condition that predisposed to the disease, and that the elements of the special poison were present and ready to combine whenever the ferment should be introduced; and that the ferment was in some way brought by the infected persons to each locality. In the case of the Tooting children, however, the disease did not become epidemic,

strictly speaking, in more than one of the five institutions. In the others, one or several of the 'attendants' suffered from the disease. In these instances the poison may have been imported, and not reproduced. This view receives support from the fact that 'several asylums and work-houses to which the Tooting children were sent were not visited by the disease,' although children died in them.

"There is another point that I must speak of, relating to the communicability of cholera. Drs. Baly and Gull directed particular attention to the question whether washerwomen, who were employed in purifying the clothes soiled by cholera patients, were particularly liable to the disease. They state that they had eighty-four communications relating to this matter; that in general when washerwomen took the disease, they were surrounded by the same influences that produced it in others, and it was difficult to determine whether there was any special danger in their occupation. They sum up by saying there were only seven instances in the eighty-four in which the evidence seemed fairly to establish connection between cholera and the clothes. At the same time they say the women who washed the clothing for the Tooting children escaped entirely; and of the thirty women in the laundry of the Milbank prison, not one was affected; while of one hundred women employed in other capacities through the prison, eight took the disease. The liability, then, even for the washerwomen, is not very great; it is perhaps a little greater than for nurses, as it is a little more for nurses than for physicians. But even if it were established that this occupation is especially dangerous, further inquiry would be necessary to determine whether the danger arises from a personal poison or a miasm imported with the clothes."

Prophylactic Arrest of Asiatic Cholera.—Dr. HENRY MACCORMAC states (*Medical Press and Circular*, June 6, 1866) that "if there be a therapeutic fact more certain than another, it is that our success in the treatment of Asiatic cholera will, *ceteris paribus*, be in the exact ratio of the recency of the treatment.

"The truth of this statement was abundantly exemplified in the results of house-to-house visitations. In Glasgow, for ex-

ample, after a system of house-to-house visitation, during cholera periods, had been once fairly organized, the mortality was surprisingly small. Cases of premonitory diarrhoea, for example, that, if neglected, would have run on to intractable and perhaps fatal cholera, were arrested by means of an opium pill and an opiate draught, with a mortality actually not exceeding one in 1,400. Nothing could be more astonishing or more entirely satisfactory. Nevertheless, numbers perished owing to neglect. The preliminary purging was either not checked at all, or having been partially checked recurred again, and not being again checked, eventuated in the fully-formed and fatal disease. I proved the fact myself in very, very many instances. Going among the dying and the dead, I have asked those about—Do you purge?—Yes. Very well, open your mouth; whereupon I could throw into the mouth and command them then and there to swallow a good grain or so of opium twiched from a lump of soft opium, which I always carried in my pocket for the express purpose. At the same time, and from the same source, I would produce a bottle of laudanum or Battley, and give 20 or 30 drops of the solution in a little water, taking care to leave a like dose to be repeated at bedtime or sooner upon an emergency. I remember once being in a house where four poor women, pitiful to relate, were lying dead at one and the same time. The mortality, in many instances, was greatly enhanced, too, by the homicidal practice, which I am sorry to say was too much encouraged, of giving and even repeating draughts of castor oil. It was too bad.

"During 1854, it was, that some alterations in the building took place, and a communication subsisting with the infected town, the Belfast District Asylum for the Insane, to which I was and am visiting physician, was visited with cholera. It broke out with startling suddenness, and forty of the inmates very rapidly perished. Many of the inmates were very unfavourable subjects for the disease, and I began to fear for the whole establishment. Intimately convinced, however, of the infinite value of prevention, it occurred to me that if I could not only arrest, but anticipate the premonitory diarrhoea, I might also arrest the disease. I immediately had prepared some dilute sulphuric acid, of whose general

efficacy in the treatment of choleraic diarrhoea, I had had ample experience; without waiting for the preliminary diarrhoea, I say, I gave to every inmate in the establishment a daily dose of about a drachm of the dilute acid in peppermint water. The existing cases of the disease having run their course to death or recovery, *no other instance of the malady occurred*; and I had the unspeakable satisfaction, owing, as I am intimately convinced, to the prophylactic efficacy of the dilute acid, of witnessing the utter disappearance of the disease.

"I would strongly recommend, and as strongly urge upon the attention of the profession, and indeed the general public, the advisability, coupled, however, in every case with every proper general sanitary precaution, of having recourse, with respect to the entire community, of the prophylactic efficacy of dilute sulphuric acid, and in the very manner in which I myself tested it. I firmly believe, ever and always neglecting no effective sanitary precaution, that it would make us virtually masters of the situation, and render the ravages of cholera, really and truly, a thing of the past."

Treatment of Premonitory Diarrhoea.—Dr. BOWERBANK says: "As regards the attacks of diarrhoea so prevalent during the visitations of cholera, I have seen all sorts of treatment employed—as mercurials, opiates, ipecacuanha, the mineral acids, laxatives, antacids, and astringents; and I have seen each and all succeed and fail in checking the disease; in cases in which the looseness was troublesome and continuous, tending to dysentery not infrequent after an attack of cholera, I have found strychnia of much service, either alone or in combination with iron. In prescribing strychnia in such cases, I generally gave it according to Marshall Hall's formula. In the majority of cases of diarrhoea I think a little ginger tea with a few grains of carbonate of soda, with attention to diet, proved sufficient. If there was pain, a few drops of some preparation of opium were added. In such cases, too, chloroform and chlorodyne prove of service; but in all cases, even of diarrhoea, the treatment should be suited to the particular case."—*Med. Times & Gaz.*, April 14, 1866.

Treatment of Cholera.—"As to the treatment of Cholera," Dr. BOWERBANK

says, "My experience is, that at the commencement of an epidemic the majority of cases die, and appear to be unamenable to any curative treatment. I have seen drugs without number tried, and have heard each and every one cried up for a time as a specific and certain cure, but have seen them again fail and put aside. I have seen and tried small and repeated doses of calomel; also large doses of the same; also small and monstrous doses of acetate of lead, the mineral acids, the alkalies, opiates, quinia, ipecacuanha, belladonna, mineral and vegetable astringents, cajuput oil, croton oil, castor oil, turpentine, creasote, nitrate of silver, sulphite of magnesia, tartar emetic, mustard, table salt in large doses, 'Stevens' saline powders,' charcoal, chlorate of potash, eupatoria or bitter bush, the fresh juice of the aloe, and many others; spirituous stimulants to intoxication, carbonic acid gas, the so-called 'Liverpool mixture,' and other boasted formulæ, warm baths, hot-air baths, external frictions, enemata of all kinds, saline injections into the veins;—but, nevertheless, I fear the results have been very unsatisfactory on the whole. Few of the first cases got well, and if they did I could not satisfy myself that their doing so was the result of what they had taken. I am quite certain that in the epidemic of 1850 I saw much mischief done by the use of spirituous stimulants and of opiates; so that in the epidemic of 1854 I almost entirely banished these remedies from my practice. Calomel and other mercurial preparations are, in certain cases and at certain stages of the disease, useful; but they have no specific effect, and in the hands of the unprofessional are calculated to do more harm than good.

"I think I have seen more good to arise from the use of Stevens' powder than from any other mode of treatment—in fact, in 1854 I confined myself chiefly to this. Having read of the use of sea-water in the treatment of cholera, and from the difficulty of getting the saline powders prepared in sufficient quantity, Dr. Campbell and myself were inclined to give sea-water a trial among the prisoners of the General Penitentiary in Kingston. We had buckets of sea-water brought from a distance from the shore, and this, well-iced by pieces of ice thrown into it, was doled out in small quantities to the sufferers; they drank it greedily, and strange to say, of the seventeen

cases who took it all recovered. Unfortunately it was not tried till towards the decline of the epidemic. In almost every case after the fourth or sixth dose, the alvine dejections became tinged with bile, as also the contents of the stomach vomited."—*Med. Times & Gaz.*, April 14, 1866.

Quarantine and Cholera.—Dr. BOWERBANK, in an article entitled "Lessons from the Cholera at Jamaica," says: "I have had no proof that any of the visitations I have seen were traceable to importation by a particular vessel; but I have known cholera introduced into a district and an island, and the disease not extend itself: thus, at any rate, proving that something more than mere introduction of the disease was necessary to its extension, and over which quarantine restrictions could exercise no influence. That cholera attacks certain districts or places, certain towns and streets, certain houses and rooms, and during the prevalence of an epidemic nestles there, I am confident, and I believe that in every such instance a bad sanitary status will be found to exist."

"The great preventives of cholera and all other epidemic diseases are pure air, pure water, plenty of daylight, and cleanliness in its widest acceptance. Where these essentials to health exist, cholera may come, and may proclaim its presence by the occurrence of diarrhoea, borborygmi, cramps, and other well-known symptoms, and it may seize as a victim a person predisposed to disease by intemperance or depression of body or mind, but here it will not nestle."

"During the epidemic of 1850, I have known towns and villages nearly depopulated; whole yards and houses, ships in port, swept clean, and not an inmate left to tell the tale. But in all such cases neglect of sanitary measures and the open violation of Nature's laws explained the cause. It will thus be seen I am of the opinion that we have no power to exclude epidemic cholera. This mysterious visitor will come to our shores in spite of us; but we have the power to lessen its ravages and to deprive it of its sting, and in effecting this we at the same time adopt the best means to rid us of those less dreaded (because more familiar and slower in their course) but more fatal scourges of our population, typhus and typhoid fever, and the entire class of tuberculous diseases."

"'Prevention is better than cure,' In no instance is the truth of this adage more obvious than as regards a visitation of epidemic cholera. Experience in all parts of the known world has taught us that its ravages may be lessened or prevented by judicious sanitary measures; but that where these have been neglected, for a time at least, after its advent, this disease resists or is but little amenable to curative treatment. In case of the outbreak of cholera in a notoriously unhealthy district, I believe, as regards the mass of the people, instead of, as hitherto, adopting the house-to-house visitation system and the unprofessional and wholesale administration of medicines, it would be far better that arrangements should be made to transfer the inhabitants, or as many as possible of them, to another place, even though it should be requisite to provide tents or to allow them to remain uncovered."—*Med. Times and Gaz.*, April 14, 1866.

The Albumen of the Blood in Cholera.—

The researches of M. FERNAUD PAPILLON on the chemical and physical constitution of the blood in cholera have been published in the *Journal de l'Anatomie* (No. 2), and deserve the notice of the profession. His observations on the nature of the albumen removed from the blood of cholera patients during the algide period show that that fluid differs materially from the normal albumen. The albumen was separated from the corpuscles by repeated filtrations. The following are the results of M. Papillon's experiments: (1) This albumen, placed for four days in water, became neither hydrated nor swollen; it remained just as it was when first added, although ordinary albumen is either dissolved or swells up under the same circumstances. (2) It does not dissolve in potash or soda, even at an elevated temperature, although ordinary albumen is soluble in these reagents, even at ordinary temperatures. (3) When treated with hydrochloric acid, it slowly dissolves, and the solution, instead of having the usual deep-violet colour, is only faintly tinted. (4) At the ordinary temperatures, common albumen decomposes rapidly a mixture of nitric and sulphuric acids, nitrous vapours being disengaged. Choleraic albumen does not do so at the ordinary temperatures. Ordinary albumen is very rapidly dehydrated by sulphuric acid;

the choleraic albumen is affected only after a long exposure.—*Lancet*, June 9, 1866.

Cholera at Liverpool.—It appears from the *Med. Times and Gaz.*, June 2, 1866, that no new cases of cholera had occurred among the emigrants landed in Liverpool since 14th of May, and that there was no suspicion of the disease having been localized in any part of the borough. This is coupled with the following significant statement:—

"In 1854 the cholera, as now, reached Liverpool through the transit of emigrants, but did not immediately spread among the other inhabitants. Thus, though in the week ending April 8 of that year there had occurred numerous deaths among the passengers and crew of the American vessel *Winchester*, the disease did not fix itself in the town with anything like epidemic virulence until the third week of July, when a fresh importation of sick emigrants was attacked by cholera on board the ship *Derigo*. Then, unfortunately, there were co-existent all the climatal causes and exciters of the disease, and from that time until the latter end of October it raged with fatal intensity."

The hope is expressed in a recent No. of the *Lancet* (June 16), "that note will be taken of the remarkable phenomena which have lately been presented in connection with the cholera in Liverpool. Its clear importation from an infected place; its frightful development under the insanitary conditions of a crowded emigrant ship; its quick and rapid disappearance under a better sanitary condition of the affected; its limitation by isolation, the only parties attacked beyond the original group, who came from an infected place, being those waiting upon the sick in various ways. These phenomena require no comment now. They involve no particular theory of contagion; but they involve the portability by persons or personal luggage of the cause of cholera, and are full of interest and importance. They go to show that cholera may be carried into a country, and may be 'stamped out' of it."

Progress of Cholera.—Cholera has broken out among the returning pilgrims from Mecca, and on the 26th and 27th of May last more than 100 deaths occurred from this disease at Djeddah.

The disease is still raging in *Holland*, and during the first week in June 85 cases, of which 55 were fatal, occurred in Rotterdam.

In the city of *New York*, according to Dr. Harris's mortuary report, six deaths from cholera occurred during the week ending June 16. Other cases have been reported, but it does not prevail as an epidemic. In other respects the health of that city, according to the *Medical Record* (July 1), is unusually good. The number of cases at the Quarantine station, near New York, is decreasing.

At *Elizabeth, N. Jersey*, or rather in a filthy suburb of that city, it is stated in a New York paper of June 28th, that 21 cases have occurred, of which 9 proved fatal.

In *Jersey City* two well marked cases are reported.

One case is reported in *Baltimore*. The subject of it was a man who was attacked immediately after his return from New York, where he is supposed to have contracted the disease, which proved fatal.

MEDICAL NEWS.

DOMESTIC INTELLIGENCE.

Library of the College of Physicians of Philadelphia.—We are happy to announce that through the liberality of their President, Dr. Geo. B. Wood, this college has been enabled to make arrangements by which their valuable and rapidly increasing library—already amounting to about thirteen thousand volumes—is daily open for the use of the Fellows of the College from 11 A. M. to 3 P. M., during which hours a member of the library committee is in attendance to lend out and receive books returned, and to aid the Fellows in consulting the works in the library.

Health of Philadelphia.—The following table, compiled from official sources, exhibiting the mortality from bowel complaints and also that from all diseases for each week in June during the years 1866 and 1865, shows that the general mortality is unusually small, and that from bowel affections, though slightly on the increase, as is always the case at this season, is far below that of last year. The total number of deaths for the

first six months of the present year, the last year. While this state of things continues no fear need be entertained of an outbreak of cholera in our city.

	MORTALITY FROM					
	Cholera Infantum.	Diarrhoea.	Dysentery.	Cholera Morbus.	Total from Bowel Affections.	Total Mortality from all Diseases.
Year 1866						
Week ending June 2,	2	2	3	0	7	242
" " " 9,	5	3	2	2	12	247
" " " 16,	9	3	1	1	14	284
" " " 23,	7	5	0	0	12	268
" " " 30,	47	8	2	4	61	335
Year 1865.						
Week ending June 3,	4	5	2	0	11	298
" " " 10,	8	7	2	2	19	278
" " " 17,	30	9	4	0	43	293
" " " 24,	63	12	9	2	76	399
" " July 1,	69	13	6	2	111	351

Trichiniasis in Marion, Linn County, Iowa.—In April last nine persons of one family in Marion, Iowa, who had eaten raw ham, were attacked with trichiniasis. The family consisted of ten, one of whom not having partaken of the food, escaped.

Dr. H. Ristine, who attended the cases in consultation, writes us under date of June 18th, that of the nine attacked five had died, the remaining four he thought would recover. Dr. Ristine has very politely sent us a portion of the *porcus magnus* muscle of one of the victims to the disease, which we find on microscopic examination to be full of free trichinae.

It is said that six cases have also occurred in a family residing twelve miles north of Marion, in the same county.

It might seem surprising, were not the recklessness of persons so common, that any one should indulge in such a dangerous gratification of their appetite as to eat raw pork.

Poisoning by Cyanide of Potassium through Carelessness.—Two cases of this are recorded in a recent number (June 21, 1866) of the *Boston Med. and Surg. Journal*, which deserve public attention.

In the first, a porter in a machine-shop, feeling thirsty dipped a tin cup into a jar of liquid, which he supposed to be water, and swallowed about three drachms before he discovered his mistake. In two minutes he became senseless, and was taken to the hospital, and strange to say, after an emetic, the use of the stomach-pump and of ammo-

nia, he recovered, for the amount of the poison swallowed was estimated at twenty-three grains, and thirty-five minutes elapsed before any of the remedies took effect.

The other case occurred a few days ago under similar circumstances. A thirsty man, a stranger amongst us, went into a jeweller's shop, and asked for a drink of water. He was directed to the rear where the sink was situated. Seeing a large covered stone jar standing near it, such as is often used for holding ice-water, he lifted the cover and drank, without stopping to look at it, about half an ounce of the liquid. He became insensible in five minutes. It was found impossible to administer an emetic of sulphate of zinc in the apothecary's shop, whither he was at once taken, or later to use the stomach-pump at the hospital. He died in thirty minutes after drinking what he supposed to be a harmless draught of water. The liquid was a solution of cyanide of potassium in water, of the same strength as that swallowed in the first case, a pound to the gallon. The quantity taken was therefore about half a drachm of one of the most deadly poisons known, of which two or three grains are sufficient to kill a large animal, and five grains have destroyed human life in several instances. The prolongation of life in this, and the wonderful escape from death in the former case, were undoubtedly in great part owing to the fact that the stomach was filled with food, and that on this account the poison was not so rapidly converted into hydrocyanic acid and absorbed.

The editor justly remarks:—

"We are far too lax in our police regulations respecting the use and sale of poisons, and if the same energy which is exercised in the enforcement of the liquor and Sunday laws were turned in this direction, much good would result."

Wholesale Poisoning by Lead.—During the past spring a large number of persons residing in the Walkill Valley, Orange County, New York, were attacked with symptoms of lead poisoning.

A correspondent of the *Public Ledger* (Philadelphia) states that:—

"After considerable research it was found that the lead was taken by the sufferers in bread and meal, and as a greater part of those staples were manufactured at a mill in Phillipsburg, an investigation was at once made in that direction, and the following facts were elicited:—

"It appears that the proprietor of the mill had gained a reputation for the superior quality of his flour, and that the farmers, for many miles around, were in the habit of bringing their wheat and corn to his mill to be made into flour and meal. Aside from this, he exported largely, so that his mill was kept constantly going, by night as well as by day. One set of stones was set apart for his "custom" work. This was an old set, constantly needing repairs, and large cavities frequently manifested themselves, which, instead of being filled up with the cement generally used for that purpose, were filled with common lead. Some of these holes were as large as a hen's egg: one, we are informed, being as large on the surface as the palm of a man's hand.

"If when filled the lead projected above the surface of the stone, it was hammered down level. Of course the attrition of the grinding detached minute particles of lead from the stone, and mingled them with the flour. The lead thus communicated, when fermented and subjected to baking with the flour, was immediately transformed into carbonate of lead, one of the deadliest of poisons.

"As soon as it was ascertained that the disease originated from the bread eaten by the sufferers, samples of the flour were analyzed by Dr. Dorrance and Mr. King, a chemist, of Middleton. These gentlemen found, to their astonishment, that the lead could be discerned with the naked eye. It

was, however, subjected to the usual standard tests, all of which revealed the presence of lead in considerable quantities. Of course, these revelations caused a panic throughout the surrounding country.

"A statement of the leading physicians of this vicinity shows two hundred and thirteen cases of lead poisoning. I am informed that over one hundred cases have occurred in the vicinity of Goshen. Many of the victims are prominent citizens.

"I am informed that a quantity of the flour has been shipped to New York, and that seven cases of poisoning from it have occurred in that city."

Stevens Triennial Prize.—A Prize Fund of one thousand dollars has been established by ALEXANDER H. STEVENS, M. D., Ex-President of the College of Physicians and Surgeons, New York, for the improvement of Medical Literature, on the following plan.

Each Prize to be awarded triennially is to consist of the interest yielded by the principal fund during the previous three years, and will amount to about two hundred dollars.

The administration of the Prize is intrusted to a commission, consisting of the President of the College of Physicians and Surgeons (*ex-officio*), the President of the Alumni Association (*ex-officio*), and the Professor of Physiology (*ex-officio*), in the same institution.

The following subjects have been selected, at the request of Dr. Stevens, for the first triennial Prize under this fund

1st. The best means of preventing death after surgical accidents.

2d. The history of improvements in the medical art, and the means by which they are attained.

The competing essays on either of the above subjects must be sent in to the President of the College of Physicians and Surgeons, New York, on or before the first day of January, 1869. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope bearing the same device or motto, and containing the name of the author.

The envelope belonging to the successful essay will be opened and the name of the author announced at the annual commencement of the College in March, 1869.

This Prize is open for universal competition.

EDWARD DELAFIELD, M. D., *President of the College of Phys. and Surg.*

ALFRED C. POST, M. D., *President of the Alumni Association of the College of Phys. and Surg.*

J. C. DALTON, M. D., *Professor of Physiology in the College of Phys. and Surg.*

College of Physicians and Surgeons, New York.—Dr. FREEMAN J. BUMSTEAD has been appointed Professor of Materia Medica and Clinical Medicine in place of the late Prof. Jos. M. Smith; and Dr. H. B. Sands adjunct Professor of Anatomy.

Destruction of the Building of the University Medical College and its valuable Contents.—We regret to make the announcement that the building of the University Medical College of this city was completely destroyed by fire on the night of the 21st of May. The valuable museums of Professors Mott and Post have been entirely lost, together with the immense and costly laboratory of Professor Draper, and the rare collection of shells and minerals belonging to the Lyceum of Natural History. Notwithstanding, however, this appalling catastrophe, we are happy to be able to state that the Faculty have not allowed a single day's intermission in the spring course of lectures. The upper portion of the Demilt Dispensary is now being temporarily used for a lecture room. The friends of the College will be glad to learn that the institution is to be at once rebuilt, with many additions, and that the work will be carried on as rapidly as possible.—*Medical Record*, June 1, 1866.

Atlanta (Geo) Medical College.—This institution commenced its eighth regular summer course of Medical Lectures on the 7th of May last. The faculty consist of: John W. Jones, M. D., Emeritus Professor of Practice of Medicine; J. P. Logan, M. D., Professor of Theory and Practice of Medicine; A. Means, M. D., Professor of Chemistry and Pharmacy; D. C. O'Keefe, M. D., Professor of Anatomy; T. S. Powell, M. D., Professor of Obstetrics and Diseases of Women and Children; Eben Hillyer, M. D., Professor of Physiology; W. F. Westmoreland, M. D., Professor of Surgery; S. H. Stout, M. D., Pro-

fessor of Surgical and Pathological Anatomy; J. G. Westmoreland, M. D., Professor of Materia Medica and Therapeutics.

The faculty have made arrangements for using the Freeman's Hospital for Clinical instruction.

Economical Sieves.—Dr JOHN PARSONS, of Mount Pleasant, Kan., writes to us:—

"For sifting dry powders sieves may be of stiff paper punched with needle holes the size of the needle making the sieve fine or coarse. The sieve may be made of any size required and secured in a drum as is the ordinary wire sieve, they are easily cleaned, cheap, and may be found useful by some practitioners."

The New Sydenham Society.—This very useful society announce the following works to be published for the current year's subscription:—

I. Bernutz and Goupil: *Clinical Memoirs on Diseases of Women*. Vol. I. Edited and translated by Dr. Meadows.

II. Hebra on Diseases of the Skin. Vol. I. Translated by Dr. Hilton Fagge.

III. Griesinger's *Manual of Mental Diseases*. Translated by Dr. Lockhart Robertson, and Dr. Rutherford.

IV. The Society's *Atlas of Skin Diseases*. A Sixth Fasciculus, to comprise (in three beautifully coloured plates 18X24 inches) Illustrations of—Eczema Impetiginoides on Face of Adult; Eczema on the Face, &c. of Infant; Eczema Rubrum on Leg of Adult; Psoriasis of hands and Finger Nails; Syphilitic Psoriasis of Finger Nails; Congenito-Syphilitic Psoriasis of Finger and Toe Nails; Onychia Maligna; Chronic General Onychitis.

We invite the attention of our readers to the advantages offered to subscribers for obtaining at a comparatively small price the valuable publications issued by this society.

For terms of annual subscription, or for list of works published, application may be made to RICHARD J. DUNGLISON, M. D., *Honorary Local Secretary*, 39 S. 11th St., Philadelphia.

American Medical Association.—The Committee of Publication have issued the following circular:—

"The Committee of Publication are obliged to appeal to the members of the American Medical Association for contribu-

tions of money to defray the expenses of printing and illustrating the transactions of the last meeting.

"The amount of assessments at the meeting in Baltimore falls short of that required by more than one thousand dollars, and unless this deficiency is supplied the volume cannot be published.

"Many members have expressed their willingness to contribute, and one has agreed to give a hundred dollars if there is any prospect of aid from others. You are earnestly requested to contribute and to forward whatever amount you may be disposed to give, to Dr. C. Wister, 1303 Arch street, Philadelphia."

Physicians' Advertisements.—We commend to the attention of the profession the following just remarks extracted from an editorial in our contemporary, the *Boston Med. and Surg. Journ.*, May 10th, 1866.

"The frequent abuse of the mistaken leniency which allows a physician publicly to announce or recommend himself, has become so frequent among us of late, as to call for some notice from us and for stringent action on the part of our State Medical Society. Until recently the announcement of a change of residence, or of a resumption of practice, was the extent of what was considered justifiable by the laws of professional decorum, although even these exceptions have sometimes overstepped the limits of propriety by being kept too long before the public eye, but now we find the newspapers of this city every day containing the advertisements of members of our body which can in no way be distinguished from those of some professional quacks. Not satisfied, moreover, with seeking notoriety by special and extra puffs in the columns of the daily journals, disgraceful exhibitions of machinery and written promises to cure are conspicuously presented to the gaze of the passer-by in office windows, pamphlets containing accounts of wonderfully successful cases are published for public distribution, and self-laudatory circulars are issued for the medical reader.

"There is another class of advertisements which is also becoming more frequent, and which, although hitherto considered at least not improper by some of the profession, is so liable to abuse in its present undefined condition, that it has become a matter worthy of grave consideration. We mean

the cards of so-called specialists published in a medical journal. It is a custom which has so gradually sprung up in this city as to have become an almost recognized law amongst us, and we do not in the least intend to reflect upon the gentleman who have availed themselves of its privileges. It is a custom, however, which is confined to ourselves, and which would be considered entirely unprofessional in any other part of the country."

The editor of the *Medical Times and Gazette* (London), in a recent number, republishes several advertisements taken from our Boston contemporary, to show that professional advertising in American journals differs from what is allowable in England. The dignity and respectability of the profession in Boston has gained nothing by the method of advertising practised by certain specialists there.

OBITUARY RECORD.—Died, in Boston, June 21, 1866, REUBEN D. MUSSEY, aged eighty-six. Dr. Mussey was one of the most eminent Surgeons of New England, and was for many years Professor of Surgery in Dartmouth Medical College, in his native State. About the year 1838 he removed to Cincinnati, Ohio, and was appointed Professor in the Miami Medical College, which he held until some ten years ago. He communicated a number of very valuable papers to the *American Journal of the Medical Sciences*, among others one on fractures of the neck of the thigh-bone within the capsular ligament.

FOREIGN INTELLIGENCE.

Liquor of Villate.—M. Houel presented to the Imperial Academy of Medicine (May 2, 1866) a pamphlet on this preparation by Dr. NORTA, of Lisieux, which drew from the members some interesting remarks, a summary of which may interest our readers.

The liquor of Villate is an astringent and escharotic preparation which according to the Veterinary Pharmacopœia is composed as follows—

Liquid Subacetate of Lead	30 parts
Crystallized Sulphate of Copper,	
Crystallized Sulphate of Zinc, 5â.	15 "
White Vinegar	200 "

Mr. N. has employed this preparation

with success for many years in the treatment of caries, and of fistulae following cold abscesses. The memoir of Dr. Notta contains numerous striking cases drawn from his own practice and that of M. Nelaton showing the efficacy of this preparation. There is much difference of opinion, however, among the members of the Society of Surgery of Paris in regard to this article. MM. Houel, Léon, Labbé, and Desormeaux assert that they have obtained the best results from its use, and have never seen any injury or even serious inconvenience result from it.

On the contrary MM. Legouest, Chassaingnac, Boinet, Le Fort, and Laborie, state that it occasions excessive, insupportable pain, irritation and very serious inflammation. Finally MM. Follin and Verneuil have used it sometimes with good, sometimes bad effects; both have found injections of the fluid induce acute pain, the first has never seen any injury result, the second has witnessed severe inflammation which, however, resulted in a cure.—*Revue de Thérapeutique Méd.-Chirurg.*, June 1, 1866.

The Baneful Effects of Nicotine prevented.—M. MELSENS has found that tobaccos, from various countries, contain nicotine in very different proportion. In tobacco from some parts of France (e. g., the department of the Lot) there is 7.96 per cent. of nicotine; whilst Havana tobacco contains only two per cent. He proposes to smokers a way of preserving them from the effects of the alkaloid, and advises them to put into the tube of the pipe or cigar-holder a little ball of cotton, impregnated with citric and tannic acids. As the smoke passes through the cotton, it will deposit the nicotine therein, in the shape of tannate and citrate. M. Melsens has made very ingenious experiments, which go a very great way to prove that he is perfectly correct.—*Lancet*, April 7, 1866.

Extirpation of Scapula.—M. MICHAUX, of Louvain, has lately presented a memoir to the Academy of Medicine of Paris giving an account of the case of a boy, aged fifteen, from whom he successfully removed the right scapula, for an encephaloid tumour involving that bone and its muscles, in November, 1864. The shoulder-joint was disarticulated and the arm left, the scapula

having been turned forwards from the ribs, and the disarticulation being effected with the écraseur. The boy recovered from the operation, but died in the following September of a cancerous tumour of the mediastinum.—*Gaz. Médicale*.

Trichina in a Cancerous Tumour.—Dr. KLOPSCH relates in the April number of *Virchow's Archiv* the case of a lady who consulted him in 1857 concerning a tumour of the right breast, and on interrogating her concerning her previous health, he found that this had always been very good except at one period—viz., in 1842—when, while residing at Dresden, she became the subject of severe pains in the joints and limbs, followed by paralysis. After a while anasarca appeared, and continued many weeks. At the end of three months from this her health began to improve, and after four months' confinement to bed she recovered. Later, she married and bore a child, and, in fact, continued in good health, with the exception of occasional muscular pains. The tumour in her breast had appeared since early in 1857, and exhibited the signs of carcinoma, and the glands of the axilla having become slowly affected, while the cancer cachexia was not developed, Professor Middeldorpf amputated her breast in May, 1863. Two years later, cancerous infiltration of the axilla having appeared, and the patient's general health being good, it was resolved to excise such parts. While separating these from the subjacent intercostals, Professor Middeldorpf observed that they were beset with white granules, which he suspected to be trichina capsules. Examined microscopically, every portion of the muscle the size of a pin's head was found to contain four or five completely calcified trichina-capsules, trichinae, on a section being made, being found free and living. This is the first instance on record in which twenty-four years after an invasion of trichiniasis, living trichinae have been still discoverable. That they really were deposited in 1842 is shown, not only by the symptoms then present and the subsequent good health of the subject, but also by the fact of two of her servants having then died suffering from similar symptoms. It is an interesting speculation how far there is any etiological connection between the trichiniasis and the cancerous degeneration.—*Med. Times and Gaz.*, June 9, 1866.

Treating Wounds by Pneumatic Occlusion.—M. JULES GUÉRIN, who during the last thirty years has been developing the principles and practice of subcutaneous Surgery, read at the last meeting of the Academy of Medicine a memoir on the "Treatment of Exposed Wounds by Pneumatic Occlusion," intending by this not very well expressed title to indicate the action of an apparatus which he has contrived, by the aid of which open wounds involving the skin and subjacent parts may be assured of a protection from the action of the air analogous to that afforded by the skin in the case of subcutaneous wounds, and therefore, freed from suppurative inflammation, enabled to heal by immediate union. After trying a long series of experiments by covering the wounded surfaces with various substances capable of isolating them from the atmospheric air, and finding these one after another fail, either by reason of the penetration of the air or the accumulation and putrefaction of the products of secretion and exhalation—he believes that he has now devised an apparatus capable of successful application. Envelopes of various forms and dimensions formed of vulcanized caoutchouc are adapted to any part of the body, and when applied to the injured part they are introduced into a metallic receiver, which is kept constantly exhausted. Between the wounded surface and the caoutchouc envelope is placed a very thin, permeable tissue, in order to facilitate exhalation from the surface. Capable, as M. Guérin believes, of a very wide application, this apparatus has at present been tried in the following cases—viz., (1) An excoriated wound left after the removal of a fibrous tumour from behind the malleolus, was covered with some waxed silk and placed in the air-tight apparatus, rapid cicatrization without suppurative inflammation following. (2) In a fracture of the forearm, with a fragment of the radius penetrating the skin, the same mode of dressing was applied, and at the end of the fourth day, the wound of the skin having become closed, the case was treated as a simple fracture. (3) After an amputation of the thigh the flaps were brought together by seven points of suture, and the stump having been placed in the apparatus, cicatrization was found to have become completed by the seventh day. As it was not sufficiently solid, however, the apparatus was re-applied until the eighteenth

day; neither fever, suppurative inflammation, nor notable pain occurring during the treatment. (4) The palm of the hand having been much shattered by the explosion of a cartouche exposing the metacarpo-pharyngeal articulations, fifteen sutures had to be applied to bring the fragments of skin together before the part could be placed in the apparatus. Once there, however, all suffering ceased, elimination of mortified parts taking place with ease, and excellent cicatrization following.—*Med. Times and Gaz.*, Feb. 17, 1866.

New Galvano-Cautic Knife.—At the *Société de Chirurgie*, M. BROCA exhibited a new galvano-caustic knife, invented by M. SÉRÉ, of the Military Hospital at Vincennes. The blade of this knife, formed of platinum, can be heated as high as 1500° C. by the passage of a galvanic current from a Grenet pile. Platinum being a soft metal, this blade has no cutting edge, but it requires an excellent one under the influence of the electrical heat, which instantly communicates to it a special temper, the blade again becoming blunt upon the abatement of the heat. At 1500°, a white-red heat, the vessels cleanly divided remain open, and the blood issues freely out. The instrument is, in fact, graduated from 1500° to 600°, the heat being increased or diminished by a very simple procedure, which consists in elongating or shortening the portion of platinum comprised in the circuit. The blade can thus be made to pass through all the intermediate degrees from a white-heat at 1500° to a dull red at 600°; and by means of these graduations the instrument can be made to fulfil three different surgical indications—(1) at 1500° it divides the tissues, producing hemorrhage; (2) at 600° hæmorrhage is produced at the same time as the incision; (3) and between these two limits it divides and cauterizes simultaneously. It is, moreover, in its mechanism an ingenious improvement upon the galvano-caustic knife already in use. M. Demarquay observed that he has once had occasion to employ the instrument, and he became alarmed at the extreme facility with which this knife, without a cutting edge, cuts through the tissues; and if care be not taken much more of these may become divided than is intended. He thinks surgeons should have their attention drawn to the excessive and truly fearful cutting powers

of this knife. M. Broca could really see nothing alarming in the powers of the knife; but that may be from his temperament being different to that of M. Demarquay.—*Ibid.*

Alcoholized Milk for Infants.—M. JULES SIMON, in his new work *Le Travail*, states that at Jelle and Rouen there are some women so saturated with intoxicating liquor that their infants refuse the breast of a sober woman. In the mountains of the Vosges the infants drink brandy.—*Lancet*, April 7, 1866.

Poisonous Principle of Mushrooms.—Dr. Letelleir says, that the poisonous substance in mushrooms is a fixed, non-crystallizable, narcotic principle—amanitine. It is precipitated by iodine and tannin. The treatment for poisoning thence resulting is vomiting and purging, followed by a strong aqueous solution of tannin.—*Brit. Med. Journ.*, April 7, 1866.

Deodorizing Properties of Ground Coffee.—Dr. BARBIER affirms that ground coffee possesses some remarkable properties as a disinfectant. In several cases where he had to make post-mortem examinations of bodies under very disagreeable circumstances, he found that a handful of coffee strewn over the body and about the room quite overcame any bad odour.—*Lancet*, April 21, 1866.

Ozone.—For the past few months our continental neighbours have been making known some valuable additions to the knowledge of this body, to the more interesting of which we shall call attention.

Our readers are probably all aware that the existence of a substance, called by its discoverer *ozone*, was made known to the scientific world by Schenbein. He did not then isolate it as hydrogen, iodine, magnesium, or other substances have been isolated; nor has he or the other workers at the subject succeeded in doing so since, although more than the quarter of a century has elapsed since its nature first became matter for investigation.

To form it there must, all are agreed, be oxygen, but we can hardly say that all are also agreed that there must not likewise be hydrogen, or rather, perhaps, water. On the whole, however, the experiments of

Andrews and Tait may be considered as settling the question at rest, at least, so far as this: From oxygen alone some of the phenomena indicating the presence of ozone can be obtained. The question is not so satisfactorily answered as to whether the substance that is formed in presence of water-vapour, and answering to the tests of ozone, is formed from oxygen only, or from a combination of oxygen and water.

But we must not say more of its nature until we have stated some of the means of obtaining it, or, more correctly speaking, obtaining indications of its existence. If perfectly dry and pure oxygen gas be electrified by passing a series of sparks through it, or, even better, according to Dr. Andrews, by silently discharging machine-electricity through it, ozone is produced. That is to say, the oxygen acquires new properties. It acquires a peculiar smell, such as is observed on standing near a large electrical machine in action, or much like that of a dense fog. It diminishes in volume. It becomes capable of *oxidizing* bodies in a way that it could not do before, so that it becomes corrosive, destroying most organic substances, such even as caoutchouc, and acting on metals, even silver, oxidizes and decomposes salts ordinarily stable, such as sulphate of magnesia and iodide of potassium, and even combines with the inactive substance nitrogen (in the presence of moisture). It is practically insoluble in water, but is absorbed by it if the water contains a material quantity of organic matter. If the oxygen which has been thus changed is treated with some of the substances affected by it, these active properties disappear, and a great part of the original oxygen employed is left unchanged. But Frémy and E. Becquerel have shown that by electrifying the oxygen in contact with moist metallic silver, or a solution of iodide of potassium, all the oxygen can be so changed as to be absorbed by these substances.

Other methods of forming ozone in the presence of water are by gently heating a mixture of air and ether vapour, or by exposing clean moist phosphorus to the air. In these cases the formation of the ozone seems to be simultaneous with the partial oxidation of the acting substance. It is also formed during the electrolysis of dilute sulphuric acid, or, as it is the fashion to say, of water acidulated with sulphuric acid. And also by the action of sulphuric acid

on peroxide of barium, and by other laboratory methods.

It has been shown to be formed during fermentation and the growth of moulds, and it is believed to be very generally produced during oxidation at ordinary temperatures. It, however, can hardly be said for certain that oxidation is a cause of the ozonization of oxygen, as we know that all the oxidations that do take place are producible by ozone itself, so that it may be that ozone is produced by the contact of oxygen with these bodies, or in other ways, and that then these bodies begin to oxidize under the action of the ozone.

Now, with regard to the test of its presence, there are several, but there is hardly one of them which cannot be challenged as an uncertain indication of it. One of the earliest tests employed, but seldom used now, was a white paper impregnated with sulphate of manganese, an almost colourless salt. This paper is turned brown by the formation of hydrated peroxide of manganese. Another test, proposed by Schenbein, and the one most in use at present, is white paper impregnated with starch-paste and iodide of potassium. This paper is turned blue, or a colour approaching it, by ozone, potassa being produced and iodine liberated, which then forms the blue compound of starch and iodine. M. Houzeau has introduced, and for a long time employed, strips of wine-coloured litmus-paper, half of each of which only is impregnated with iodide of potassium. This he does because there are other substances that are liable to change the iodized starch-papers by liberating iodine which will not affect these papers. For these other substances liberate the iodine by forming a neutral salt with the potassium, such as acid vapours, chlorine, etc., but ozone does so by forming potassa, which is alkaline. This alkalinity his papers indicate by the part charged with the iodine becoming, under the influence of ozone, blue from the action of the potassa on the violet litmus, and then contrasting with the unchanged colour.

We have already indicated the most striking properties of ozone, but there are still some things requiring notice. By its powerful oxidizing action on organic matter, it quickly purifies air or water charged with organic matters, removing smell and taste from them. Indeed, the most offensive masses of putrid matter lose their offensive-

ness to the senses by the action of this body. Its active chemical properties render it a powerful irritant to mucous surfaces. By heat ozonized oxygen loses all the properties of ozone, and regains its own; among others, its proper volume.

We have also to say a little concerning the destiny of ozone. Since oxygen converted, or partly converted, into ozone, contracts in volume, it is evident that ozonized oxygen must be denser than ordinary oxygen. Attempts have recently been made to determine its destiny, by M. Soret. We must mention that when ozonized oxygen is exposed to the action of iodide of potassium or moist silver, it loses its peculiar properties, except that it does not reassume its original volume, as it does when heated. Further, that the loss of oxygen is accounted for, and the absorption of ozone proved, by the fact that a quantity of iodine chemically equivalent to this oxygen or ozone is set free from the iodide of potassium. It is just possible, it seems to us, that ozone may be a vapour of very low tension, of a highly volatile liquid, which we have not yet been able to get in sufficient quantity in a given space to make it reach the point of maximum density, when formation of liquid would take place. For, then, the slight loss of elastic force by the absorption of it from its mixture with oxygen might well escape observation. However, chemists do not seem to hold this view. The one which has for some years been suggested is that ozone is half as dense again as oxygen. On this hypothesis, iodide of potassium is considered to absorb one-third of the matter of ozone, and to liberate the other two-thirds as ordinary oxygen. This, of course, requires the further admission that the ozone behaves as if formed of two kinds of matter, two kinds of oxygen, and that it is an oxide of oxygen having the formula O_3O . We shall not pretend to criticize this hypothesis. We refer to it here, partly because M. Soret has attempted to determine the density of ozone, and he finds his experiments confirm the view that three volumes of oxygen are condensed to two. He has discovered that oil of turpentine so acts upon ozonized oxygen as to cause the volume of the gas to diminish, instead of this remaining unchanged, as when iodide of potassium acts upon it. He concludes from this that iodide of potassium decomposes this compound oxygen, or ozone, and

absorbs part, while turpentine absorbs it wholly. Granting the truth of this conclusion, our readers will at once understand that if, as in the experiments of M. Soret, two measured quantities of the same ozonized oxygen are taken, and the one acted upon by turpentine and the other by heat, that the volume of oxygen equal to the ozonized gas will be learned from the latter action, and the quantity of unchanged oxygen in a given bulk of the gas from the former. The difference between the volume of the original oxygen and that of the unchanged oxygen will give the quantity converted into ozone; the diminution in the bulk of the ozonized gas caused by turpentine will give the volume of the ozone absorbed by it. M. Soret found in this way that the volume of the ozone absorbed by the oil of turpentine was produced from a volume almost half as great again of oxygen. Hence he concludes that the density of ozone is half as great again as that of oxygen.

We have so much more to say about ozone, more especially as regards the late controversy as to its existence or not in the atmosphere, that we must reserve this for another article.—*Med. Times and Gazette*, April 7, 1866.

Mortality of London.—The mortality of the metropolis continues to be greatly beyond the ordinary average. In the week ended Saturday, June 9, the number of deaths was 1313, the average of the ten previous weeks being 1087. Measles, scarlatina, whooping-cough, typhus, and diarrhoea continue to be unusually fatal. Four fatal carriage accidents in the street are registered, and three deaths from cholera.—*Lancet*, June 16, 1866.

Sickness in the Prussian and Austrian Armies.—The cholera has made its appearance at Altenburg, a town in Prussia. The right flank of the Prussian army being in cantonments near to Altenburg, the medical officers have taken all precautions should it spread to the troops. Other descriptions of sickness are very prevalent in the Prussian army. One thousand sick soldiers have already been sent back to Berlin; and it is stated that illness reduces the effective men one per cent. a day. Typhus has made its appearance in the Austrian army.—*Ibid.*

Annual Prizes of the Imperial Academy of Medicine.—These were announced on the 12th December last. The Academy prize of 1000 francs was adjudged to Dr. Martin, its subject being Traumatic Paralysis. Baron Portal's prize of 1000 francs, "On the Specific Anatomical Characters, if there be any, of Cancer," was gained by M. Cornil. There were six competitors for Madame de Civrieux's prize of 1000 francs; the question being, "The Relations between General Paralysis and Madness." M. Magnan took the prize. Capuron's prize of a like value, "the Pulse in the Puerperal State," was not adjudged. An encouragement, however, of 600 francs was given to M. Hemy, one of three competitors. Baron Barbier's impossible prize of 8000 francs, for a cure of incurable diseases, found seven candidates. A prize of 7000 francs was adjudged, as the nearest approach to the programme, to M. Chasaignac, as author of "Ecrasement Linéaire." M. Amussat's prize of 2000 francs found four candidates, but no takers; but recompenses were given to two of them. Eight works were sent in for Godard's prize of 1000 francs; but the Academy gave only two recompenses.—*Brit. Med. Journ.*, Dec. 23, 1865.

Treatment of Acute Rheumatism with Blisters.—The *Weiner Medizin Wochenschrift* says, that the method of treating acute rheumatism with blister laid on the inflamed joints was first practised by Dr. Dechilly, of Vaucouleurs; and that in 1850 he communicated a paper on the subject to the Paris Academy of Medicine, through Martin Solon.—*Brit. Med. Journ.*, April 7, 1866.

OBITUARY RECORD.—Died, At Tunbridge Wells, on Feb. 11, 1866, W. T. BRÄNDÉ, Esq., F. R. S., aged 81. Dr. B. early in life devoted himself to chemical studies, and was for some time assistant and afterwards the successor of Sir Humphry Davy as Professor of Chemistry to the Royal Institution of Great Britain. He was a voluminous writer.

— At Jaffa, whither he had gone on one of those missions of love and mercy in which he delighted, on the 5th of April, THOMAS HODGKIN, aged 68. Dr. H. was a physician of great talent, was a fine scholar, an accomplished linguist, and a warm hearted philanthropist.

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The illustrations form a novel feature in the work. The lithographic plates are all original, and to insure their absolute accuracy they have all been copied from photographs taken expressly for the purpose. In ordinary obstetrical plates, the positions of the fetus are represented by diagrams or sections of the patient, which are of course purely imaginary, and their correctness is scarcely more than a matter of chance with the artist. Their beauty as pictures is thereby increased without corresponding utility to the student, as in practice he must for the most part depend for his diagnosis upon the relative positions of the foetal skull and the pelvic bones of the mother. It is, therefore, desirable that the points upon which he is in future to rely should form the basis of his instruction, and consequently in the preparation of these illustrations the skeleton has alone been used, and the aid of photography invoked, by which a series of representations has been secured of the strictest and most rigid accuracy. It is easy to recognize the value thus added to the very full details on the subject of the MECHANISM OF LABOR with which the work abounds.

It may be added that no pains or expense have been spared to render the mechanical execution of the volume worthy in every respect of the character and value of the teachings it contains.

Dr. Hodge having been engaged for thirty-one years in the teaching of Obstetrics, has very justly thought that the results of his large experience and reflections might be of advantage to the profession. These he has therefore communicated in a handsome, well illustrated volume. An excellent text-book; while he shows that in the management of parturient women he has been guided quite as much by his personal experience as by the teachings of other men. A valuable contribution to medical literature. It gives evidence of very hard work, and it shows that Dr. Hodge may say, in the words of Baudelocque, "Though the reading of authors has been of great use to me, it will be found that the study of nature has been of much more."—*London Lancet*, Aug. 20, 1864.

The work of Dr. Hodge is in the highest degree creditable to its author, and confers no trifling honor upon the school whose chair of Obstetrics he so long and so ably filled. It cannot fail to become, at least with American practitioners, a standard authority; the author being as much distinguished for his intimate acquaintance with his subject, in all its details; his long experience and admirable skill in the practice of Obstetrics; his entire accuracy and perfect faithfulness in the report of his experience—in its bearing, especially, upon every unsettled question, whether relating to the science or the art of Midwifery. They who shall rise from a careful study of the mechanism of labor as described by Dr. Hodge in the work before us without clear and exact views in regard to it, will scarcely be able to master the subject after the most careful demonstration of it by the most accomplished teacher. It constitutes, very certainly, one of the fullest and most complete treatises on the principles and practice of Obstetrics that has yet appeared in either Europe or America; and we may safely add, the most reliable. On whatever question in midwifery the practitioner may consult it, he will find always the needed information, and may repose the fullest confidence in following it that he will not be led into grievous error.—*Amer. Med. Journal*, July, 1864.

Great labor has been bestowed upon the prepara-

tion, and great expense incurred in the publication of this work. It is astonishing that such an extensive and complete treatise upon any branch of medical practice should appear at such a time, and shows that the medical profession of America are anxious to be in possession of all that is known upon the subject. We have no work in our language so extensive and complete upon the art and practice of Obstetrics; and though several works of great merit have appeared within the last few years, still, no medical library can be considered complete without this volume.

The illustrations are numerous and complete; as an illustrated work, it is superior to any which has appeared. We should be glad to give a list of the subjects represented, but suffice it to say that everything desirable has been faithfully and naturally represented by lithographic plates, prepared with great accuracy and care. On this account, as a text-book for the student and young practitioner, it is of incomparable value.—*Buffalo Med. and Surg. Journal*, July, 1864.

More time than we have had at our disposal since we received the great work of Dr. Hodge is necessary to do it justice. It is undoubtedly by far the most original, complete, and carefully composed treatise on the principles and practice of Obstetrics which has ever been issued from the American press.—*Pacific Med. and Surg. Journal*, July, 1864.

The work is published in quarto form. A leading feature will strike the reader in the lithographic figures from original photographs, which illustrate more perfectly than the ordinary wood-cuts ever did, the anatomy of the parts involved, and the mechanism of labor. The mechanical execution throughout is fully equal to the best work, for which the enterprising publishers are so justly celebrated.

We have examined Professor Hodge's work with great satisfaction; every topic is elaborated most fully. The views of the author are comprehensive, and concisely stated. The rules of practice are judicious, and will enable the practitioner to meet every emergency of obstetric complication with confidence.—*Chicago Med. Journal*, Aug. 1864.

HENRY C. LEA, Philadelphia.